



OIL ANALYSIS REPORT

NORMAL

Area Chem-Ecol A2407021

Component Hydraulic System

CHEM-ECOL HYDRAULIC 220 AWT (--- GAL)

DIAGNOSIS

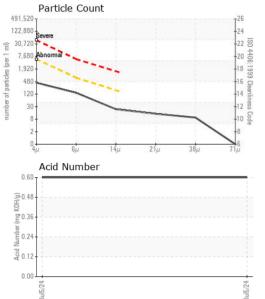
Recommendation

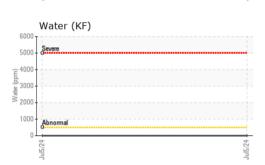
We certify that this oil is clean, that the additives are at acceptable levels, and that it is suitable for use.

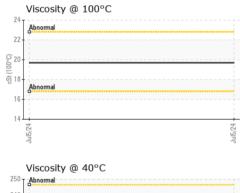
| SAMPLE INFORM | IATION | method | limit/base | current | history1 | history2 |
|------------------|--------|---------------|------------|-------------|----------|----------|
| Batch # | | Client Info | | 3136-A | | |
| Department | | Client Info | | Production | | |
| Sample From | | Client Info | | Machine | | |
| Production Stage | | Client Info | | Final | | |
| Sent to WC | | Client Info | | 07/05/2024 | | |
| Sample Number | | Client Info | | E30002587 | | |
| Sample Date | | Client Info | | 05 Jul 2024 | | |
| Machine Age | hrs | Client Info | | 0 | | |
| Oil Age | hrs | Client Info | | 0 | | |
| Oil Changed | | Client Info | | N/A | | |
| Sample Status | | | | NORMAL | | |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185(m) | >20 | <1 | | |
| Chromium | ppm | ASTM D5185(m) | >20 | 0 | | |
| Nickel | ppm | ASTM D5185(m) | >20 | <1 | | |
| Titanium | ppm | ASTM D5185(m) | | 0 | | |
| Silver | ppm | ASTM D5185(m) | | 0 | | |
| Aluminum | ppm | ASTM D5185(m) | >20 | <1 | | |
| Lead | ppm | ASTM D5185(m) | >20 | 0 | | |
| Copper | ppm | ASTM D5185(m) | >20 | <1 | | |
| Tin | ppm | ASTM D5185(m) | >20 | 0 | | |
| Antimony | ppm | ASTM D5185(m) | | 0 | | |
| Vanadium | ppm | ASTM D5185(m) | | 0 | | |
| Beryllium | ppm | ASTM D5185(m) | | 0 | | |
| Cadmium | ppm | ASTM D5185(m) | | 0 | | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185(m) | | <1 | | |
| Barium | ppm | ASTM D5185(m) | | 0 | | |
| Molybdenum | ppm | ASTM D5185(m) | | 0 | | |
| Manganese | ppm | ASTM D5185(m) | | 0 | | |
| Magnesium | ppm | ASTM D5185(m) | | 140 | | |
| Calcium | ppm | ASTM D5185(m) | | 101 | | |
| Phosphorus | ppm | ASTM D5185(m) | | 392 | | |
| Zinc | ppm | ASTM D5185(m) | | 528 | | |
| Sulfur | ppm | ASTM D5185(m) | | 1040 | | |
| Lithium | ppm | ASTM D5185(m) | | <1 | | |
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
| Silicon | ppm | ASTM D5185(m) | >15 | <1 | | |
| Sodium | ppm | ASTM D5185(m) | | 3 | | |
| Potassium | ppm | ASTM D5185(m) | >20 | 0 | | |
| Water | % | ASTM D6304* | >0.05 | 0.00 | | |
| ppm Water | ppm | ASTM D6304* | >500 | 0 | | |



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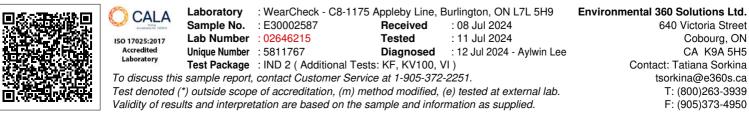






| FLUID CLEANLIN | IESS | method | | | | history2 |
|----------------------|----------|---------------|------------|----------|----------|----------|
| Particles >4µm | | ASTM D7647 | >5000 | 371 | | |
| Particles >6µm | | ASTM D7647 | >640 | 122 | | |
| Particles >14µm | | ASTM D7647 | >160 | 20 | | |
| Particles >21µm | | ASTM D7647 | >40 | 12 | | |
| Particles >38µm | | ASTM D7647 | >10 | 8 | | |
| Particles >71µm | | ASTM D7647 | >3 | 0 | | |
| Oil Cleanliness | | ISO 4406 (c) | >19/16/14 | 16/14/11 | | |
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
| Acid Number (AN) | mg KOH/g | ASTM D974* | | 0.60 | | |
| VISUAL | | method | limit/base | current | history1 | history2 |
| White Metal | scalar | Visual* | NONE | NONE | | |
| Yellow Metal | scalar | Visual* | NONE | NONE | | |
| Precipitate | scalar | Visual* | NONE | NONE | | |
| Silt | scalar | Visual* | NONE | NONE | | |
| Debris | scalar | Visual* | NONE | NONE | | |
| Sand/Dirt | scalar | Visual* | NONE | NONE | | |
| Appearance | scalar | Visual* | NORML | NORML | | |
| Odor | scalar | Visual* | NORML | NORML | | |
| Emulsified Water | scalar | Visual* | >0.05 | NEG | | |
| Free Water | scalar | Visual* | | NEG | | |
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
| Visc @ 40°C | cSt | ASTM D7279(m) | 220 | 226 | | |
| Visc @ 100°C | cSt | ASTM D7279(m) | | 19.7 | | |
| Viscosity Index (VI) | Scale | ASTM D2270* | | 99 | | |
| SAMPLE IMAGES | | method | limit/base | current | history1 | history2 |
| | | | | | | |
| Color | | | | | no image | no image |





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Contact/Location: Tatiana Sorkina - CHECOB

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